

REMARKS

Claims 1, 3, 5-17 and 19-38 are pending, with claims 35-38 added by this paper.

Claim Rejection Under 35 USC §112, second paragraph

Claim 12 stands rejected as allegedly being indefinite. Applicants have amended this claim for clarification, and as such, Applicants respectfully submit that these changes do not narrow the scope of the claim. Consequently, Applicants respectfully submit that this amendment should be entered to withdraw this ground of rejection.

Claim Rejections Under 35 U.S.C. §103

Claims 1, 3, 5-11, 13-14, 19-26 and 29-34 stand rejected as allegedly being unpatentable over U.S. Patent No. 5,501,248 (Kiest) and U.S. Patent No. 6,019,136 (Walsh) in view of U.S. Patent No. 5,596,021 (Adembri); and claims 1-11, 13-14, 18-26, and 30-34 stand rejected over U.S. Pat. No. 5,322,653 (Muller) in view of Adembri. Applicants respectfully traverse these rejections.

Walsh, Kiest, and Muller pertain to inflatable liners to repair pipes. Generally, in these types of devices, the liner includes a single composition whose reaction is delayed until the liner is set in place and inflated. These references are allegedly combinable with Adembri to render the claims obvious.

Adembri pertains to a composition consisting of two reactive systems capable of independently undergoing polymerization, namely the first system includes (A) an isocyanate or an isocyanate prepolymer and the second system includes (B) an unsaturated polyester resin or a vinyl ester resin (column 1, lines 10-29). After creating each system independently, these systems can be mixed together to rapidly react inside a mold to create a finished piece (column 1, lines 37-50). The finished piece displays high mechanical properties, better self-extinguishing and flame retardant characteristics, and is particularly suited for use as a composite component in the automobile industry (column 2, lines 15-37).

However, Adembri is nonanalogous art with respect to radially deployable flexible preforms.

In order to rely on a reference as a basis for rejection, the reference must either 1) be in the field of applicant's endeavor or 2) then be reasonably pertinent to the particular problem with which the inventor was concerned. *In re Clay*, 23 U.S.P.Q. 1058 (Fed. Cir. 1992).

In that case, the Board rejected claims over two patents, U.S. Pat. No. 4,664,294 (Heth.) and U.S. Pat. No. 4,683,949 (Syd.) under 35 U.S.C. §103. The application claims defined a process for storing a refined liquid in a storage tank comprising preparing a gelatin solution, placing solution in dead volume, and gelling the solution to fill dead volume. Heth. disclosed an apparatus for displacing dead space using impervious bladders or large bags and Syd. disclosed a process for reducing the permeability of hydrocarbon bearing formations using a gel similar to that claimed.

The court held that Syd. was not in field of invention merely because both relate to petrochemical industries. Syd. taught the use of a gel in unconfined and irregular volumes within generally underground natural oil-bearing formations to channel flow in a desired direction while the invention related to the introduction of gel to the confined dead volume of a man-made storage tank. Moreover, Syd. was the *extraction* of crude petroleum while the invention dealt with the *storage* of refined hydrocarbons. Consequently, Syd. was not in the field of Appellant's invention.

Moreover, Syd. did not solve the same problems as Appellant's invention. The Syd. gel treatment of underground formations functioned to fill anomalies so as to improve flow profiles and sweep efficiencies of injection and production fluids through a formation while the inventive gel functioned to displace liquid product from the dead volume of a storage tank. Syd. faced the problem of recovering oil from porous rock. Such a problem was not reasonably pertinent to preventing loss of stored product to tank dead volume while preventing the contamination of such product. Thus, it was held that a person of ordinary skill in the art would not reasonably expect to solve the problem of dead volume in tanks by considering a reference dealing with plugging underground formation anomalies. The rejections were reversed.

In the present case, a binary system used to make a composite component for, e.g., an automobile is not in the same field as a radially flexible deployable preform. Adembri makes a binary composition that when combined in a mold, immediately reacts to form an article. In marked contrast, the composition of the claimed invention is, e.g., deployed in a pipe or well, deformed radially outward, and allowed to cure in position. The reaction cure time and the location are

completely different.

Moreover, the present invention and Adembri pertain to different problems. The present invention pertains to a preform that is deployable, deformable radially outward, and curable once set in place. In marked contrast, Adembri pertains to separate mixtures that when combined rapidly in a mold create a composite component that displays high mechanical properties, and better self-extinguishing and flame retardant characteristics. Consequently, Applicants respectfully submit that Adembri is nonanalogous art and should not a basis for rejection.

However, even if Adembri is analogous art, there must be some explicit or implicit suggestion for one of skill in the art to modify references to render an invention *prima facie* obvious. *In re Bond*, 15 USPQ2d, (Fed. Cir. 1990). In that case, the claimed invention was a delay preventing an answering machine from picking up a line after it was set by an initial incoming call. If the answering machine was not set after leaving home, a user would call home to set the machine. A delay was provided preventing the machine, once set, from picking up the line and creating tolling charges. The Board held that the claim was obvious in view of Curtis and Hanscom. The Curtis device experienced some inherent delay after it was energized to set the answering machine and before the answering machine picked up. However, Curtis neither placed any importance on this delay nor specifically noted that the line seizure should be deferred. Hanscom disclosed a microprocessor that counted the number of rings and delayed the seizure of the line until after a preset number of rings.

The Federal Circuit held that despite the fact that Curtis had some inherent delay, neither reference would have suggested to one of skill in the art the claimed invention. Neither reference expressly nor implicitly suggested that a microcomputer assembly should be embodied in a Curtis-like device in such a manner to produce the inherent, yet unmentioned, delay experienced by the Curtis device.

The holding in *In re Bond* is applicable in the present case. Particularly, the compositions of Adembri are used to create a finished piece that forms rapidly after mixing the first system made from an isocyanate or an isocyanate prepolymer and the second system made from an unsaturated polyester resin or a vinyl ester resin. Adembri fails to teach or suggest any desirability to provide any inhibitors or other mechanism to delay creation of the finished piece so as to be suited as an

inflatable liner in either Walsh, Kiest or Muller. Consequently, Applicants respectfully submit that these references are not combinable.

With respect to claims 31-34, the Action alleges that it would have been obvious to one of ordinary skill in the art at the time of the invention to use an inhibitor in the amounts disclosed by Adembri (column 5, lines 8-29 and column 5, line 41) in order to delay the curing reaction for a set amount of time. Applicants respectfully traverse these allegations because Adembri broadly discloses that component (B) can be obtained by condensation of derivatives of epoxydized bisphenols A, F and S with acrylate monomers of acrylic acid and methacrylic acid type. It fails to disclose any blazemarks or guideposts to lead one skilled in the art to the combination of elements and amounts defined by claims 31-34. The fact that a claimed product might be found within the broad field of the prior art and one might arrive at it by selecting specific items and conditions does not render the product obvious in the absence of some direction or reason for making the selection. *See Ex parte Koon*, 132 U.S.P.Q. 359 (Pat. Bd. of App. 1962) and *In re Baird*, 29 U.S.P.Q. 2d 1550 (CAFC 1994). Consequently, Applicants respectfully submit that these rejections should be withdrawn.

In addition, the Action admits that residual latent periods are not disclosed by the cited references, but alleges them to be inherently present in the invention of Adembri.

Applicants respectfully traverse these rejections.

To establish *prima facie* obviousness of a claimed invention, all claim features must be taught or suggested by the prior art. *See In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974), M.P.E.P. §2143.03.

The cited references fail to teach or suggest the combination of features defined by claim 1. Particularly, the cited references fail to teach or suggest at least one resin with a residual latent period, after storage at 22°C for a period of twenty days or more, for at least 3 hours at a temperature of about 10°C to about 90°C. Applicants respectfully traverse any assertions that these features are inherently present in the cited references. Consequently, Applicants respectfully submit that these rejections should be withdrawn.

What is more, Adembri requires an isocyanate or an isocyanate prepolymer. Applicants respectfully submit that such a material would materially affect the basic and novel characteristics of the claimed invention (relevant to claim 37) because the presence of isocyanate is compulsory to

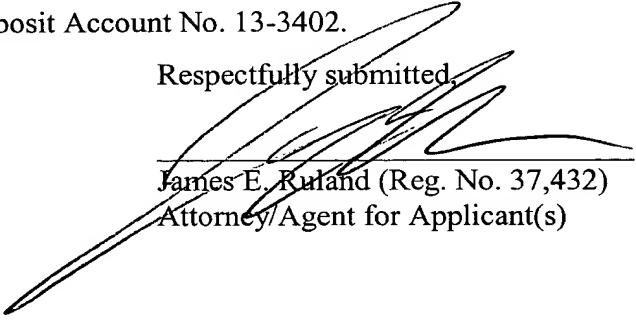
form both interpenetrated structures. Thus, isocyanate is excluded from that claim. Moreover, an isocyanate or an isocyanate prepolymer is clearly excluded by the "consisting of" terminology in claim 38.

With respect to the teachings of the other secondary references, U.S. Pat. No. 5,688,867 (Scheibelhoffer) and U.S. Pat. No. 6,108,998 (Dumlao), because they do not cure the basic deficiencies of the combination of references, their addition with the other prior art does not cure these deficiencies to render the claims obvious. So as not to burden the record further, Applicants will not discuss each of the aforesaid secondary references in detail except to state that Applicants do not necessarily acquiesce to any of the statements in the office action referring to such secondary references and reserve the right to comment later regarding same, if ever necessary.

In view of the above remarks, favorable reconsideration is courteously requested. Attached hereto is a marked-up version of the changes made to the claims by the current paper. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE." If there are any remaining issues which can be expedited by a telephone conference, the Examiner is courteously invited to telephone counsel at the telephone number indicated below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,


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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend claim 12 as follows.

12. (Twice Amended) A flexible preform according to claim 1, containing at least one resin comprising in its chemical formula at least one multiple bond, wherein the at least one resin further comprises and at least one monomer not forming part of the sub family of polymer vinyl esters, or ~~in the form~~ of oligomers or pre-polymers of a bisphenol A derivative diacrylate oligomer, an epoxydimethacrylate oligomer diluted with trimethylolpropane diacrylate, or a diethoxylated dimethacrylate bisphenol A derivative.